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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,083	09/26/2003	Yann Le Gallo	60130-1896;02MRA0122	4699
26096	7590	10/14/2005	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			ELLIS, SUEZU Y	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

(A)

<b>Office Action Summary</b>	<b>Application No.</b> 10/672,083	<b>Applicant(s)</b> LE GALLO ET AL.	
	<b>Examiner</b> Suezu Ellis	<b>Art Unit</b> 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **RESPONSE TO AMENDMENT**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-4, 6-12 and 14-20 have been considered but are moot in view of the new grounds of rejection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-4, 6-12 and 14-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, line 4 recites "reference distribution". Does applicant mean a reference distribution of light? Further, when applicant recites "distribution", does applicant mean a pattern or a value/level? Please clarify. Note, if applicant does mean a pattern of light, the specification seems to fail to support the idea. The applicant discloses the distribution of light being compared to a reference distribution. However, the applicant fails to disclose the reference distribution being a pre-set pattern and the distribution of light being a pattern wherein the patterns themselves are compared, but instead the distribution of light and the reference distribution can each be a histogram wherein individual values or levels in the histogram can be compared. For examining

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purposes, the reference distribution will be deemed as any reference level or threshold of light.

With respect to claim 14, line 3 recites "the step of integrating occurs over a period dependent on the ambient brightness detected". Does applicant mean the period of time of integration is dependent on the whether or not ambient brightness is detected or the level of the brightness detected? For examining purposes, claim language will be interpreted as the period of time of the integration is dependent on the level of the ambient brightness detected.

Claims not specifically addressed are indefinite due to their dependency.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 6, 7, 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Boiucaner (US 5,142,152).

With respect to claims 1, 6 and 7, Boiucaner discloses an obstruction detector (sliding door sensor) comprising a light sensor (light receiver) and infrared light transmitters. Boiucaner further discloses comparing the radiation detected from the receiver and compared to a predetermined reference level wherein the reference level

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is updated (col. 4, lines 30-33). Note, applicant fails to define distribution of light and reference distribution as being a pattern of light, thus a reference level is deemed equivalent to a reference distribution.

With respect to claim 4, Boiucaner discloses a lens cover encloses the emitters and receivers (col. 4, lines 44-45).

With respect to claim 10, Boiucaner discloses an opening (the area of a door), an openable member (sliding door) moveable to a closing line (door threshold) and that contacts the closing line when the openable member is in a closed position. Boiucaner discloses a detector (sliding door sensor - 10) that includes a light sensor (IR receivers - 26, 27) and a circuit that analyzes light received by the light sensor (col. 4, lines 30-35, 38-40). Although the system of Boiucaner is not directed towards an automobile vehicle, applicant's claim language does not provide any structural limitations limiting the system to an automobile vehicle, therefore, the limitation in the preamble of the system as stated is directed towards an intended use of the system, and hence, cannot be given patentable weight. Note however, the technology of Boiucaner would be capable to be crossed over into an automobile vehicle environment since detecting an object in an automatic door is similar to that in automatic windows (i.e. detection of an object in a zone of a sliding element).

With respect to claim 11, Boiucaner illustrates in Fig. 1, the sensor covering a detection area an area approximate to the closing line.

With respect to claim 12, Boiucaner discloses a method of detecting an obstruction in a path of an openable member (sliding door) comprising the steps of

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detecting light along a closing line (door threshold) of the openable member with a light sensor to form a light distribution (quantified reflected light), comparing the light distribution with a reference distribution (pre-determined reference level), and updating the reference distribution (col. 4, lines 30-33). Boiucaner further discloses a microprocessor generates an output signal indicative of the identification of an object in the threshold zone wherein the signal is used for producing an operator signal for operating the automatic door system. Since applicant fails to define the means via indicating an obstruction, the output signal is deemed equivalent to a means of indication.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 8, 9, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boiucaner.

With respect to claim 2, Boiucaner addresses all the limitations of claim 1, however fails to expressly disclose the detector being a charge coupled device, however, it would have been an obvious design choice to a person of ordinary skill in

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the art to incorporate a charge coupled device as the sensor since a charge coupled device is well known in the art to be used in obstruction detection systems.

With respect to claims 8, 9, 16 and 17, Boiucaner addresses all the limitations of claims 1 and 12, however fails to expressly disclose activating a light source when the light received by the light sensor is below a threshold value and deactivating the light source when the light received by the light sensor is above a second threshold value. It would have been an obvious to a person of ordinary skill in the art to activate or deactivate the light source depending on threshold values in order to prolong the lifetime of the light source.

### ***Allowable Subject Matter***

Claims 3, 14, 15 and 18-20 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

With respect to claim 3, prior art fails to reach or reasonably suggest the light sensor includes a plurality of imaging elements and the distribution of light defining a histogram of gray levels of the plurality of imaging elements, in addition to the other limitations of the claim.

With respect to claim 14, prior art fails to teach or reasonably suggest detecting light via a step that includes integrating and detecting an ambient brightness and the step of integrating occurs over a period dependent on the level of ambient brightness detected.

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With respect to claims 18-20, prior art fails to teach or reasonably suggest the reference distribution is a reference histogram of grey levels.


Claim 15 would be allowable due to its dependency on claim 14.

***Telephone/Fax Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suez Ellis whose telephone number is 571-272-2868. The examiner can normally be reached on 8:30am-5pm (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Stephon B. Allen  
Primary Examiner